Guidelines for Algae and Cyanobacteria in Fresh Water

(from WHO Guidelines for Safe Recreational Water Environments (PDF), Table 8.3, Guidelines for Safe Practice in Managing Recreational Waters, page 150)

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Probability of Adverse Health Effects	Guidance Level or Situation	How Guidance Level Derived	Health Risks	Typical Actions
Relatively low	20,000 cyanobacterial cells/ml or 10 µg chlorophyll- a/liter with dominance of cyanobacteria	From human bathing epidemiological study	Short-term adverse health outcomes, e.g., skin irritations, gastrointestinal illness	Post on-site risk advisory signs Inform relevant authorities
Moderate	100,000 cyanobacterial cells/ml or 50 µg chlorophyll- a/liter with dominance of cyanobacteria	From provisional drinking-water guideline value for microcystin-LR [= 1 µg/L] and data concerning other cyanotoxins	Potential for long- term illness with some cyanobacterial species Short-term adverse health outcomes, e.g., skin irritations, gastrointestinal illness	Watch for scums or conditions conducive to scums Discourage swimming and further investigate hazard Post on-site risk advisory signs Inform relevant authorities
High	Cyanobacterial scum formation in areas where whole-body contact and/or risk of ingestion/aspiration occur	Inference from oral animal lethal poisonings Actual human illness case histories	Potential for acute poisoning Potential for long-term illness with some cyanobacterial species Short-term adverse health outcomes, e.g., skin irriations, gastrointestinal illness	Immediate action to control contact with scums; possible prohibition of swimming and other water contact activities Public health follow-up investigation Inform public and relevant authorities

^{*}Actual action taken should be determined in light of extent of use and public health assessment of hazard.